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EXAMINER	
HARPER, V PAUL	

ART UNIT	PAPER NUMBER
2654	13

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/029,539	Applicant(s) SHAFFER ET AL.	
	Examiner V. Paul Harper	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 11-22* is/are rejected.

7)☒ Claim(s) *8-10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 6,12, 14, 16, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US Patent 5,054,082), hereinafter referred to as Smith, in view of Kanevsky et al. (US Patent 5,897,616), hereinafter referred to as Kanevsky, and Shaffer et al. (US Patent 5,848,131), hereinafter referred to as Shaffer.

Regarding claim 1, Smith teaches a method for programming devices to recognize voice commands. Smith's teachings include the following steps: entering an identification code that is transmitted to a central repository (col. 3, lns. 15-18), which corresponds to "capturing an identifier related to a speaker provided over a communication network"; identifying and requesting a particular codebook from the codebook library (col. 3, lns. 11-13), which corresponds to "selecting a subset of records from a plurality of records based on the linkage key"; operating the subscriber unit by voice command (col. 3, lns. 50-53), which corresponds to “capturing a vocal expression

of the speaker"; transmitting a codebook to the subscriber based on the training of words to be recognized for an individual (col. 2, lns. 53-67, col. 3, lns. 15-40), which corresponds to "obtaining a grammar based of potential matching words upon the subset of records"; performing speech recognition based on the stored codebook (col. 3, lns. 50-53), which corresponds to "determining information related to the vocal expression based on comparing the grammar with the captured vocal expression." But Smith does not specifically teach, "determining a linkage key using the identifier." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky and Shaffer. First consider Kanevsky.

In the same field of endeavor, Kanevsky teaches methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models where through the process of identification access is allowed into database systems (col. 1, lns. 26-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically allowing a user access to a database system, as taught by Kanevsky, for the purpose of accessing desired services (col. 3, lns. 11-15). But Smith in view of Kanevsky does not specifically teach the use of a linkage key. However, the examiner contends that this concept was well known in the art, as taught by Shaffer.

In the same field of endeavor, Shaffer discloses an automatic information and routing system for telephonic services that includes the creation of a universal database linkage key (col. 6, lines 57-65), which corresponds to the concept of a "linkage key."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky by specifically using a linkage key, as taught by Shaffer, for the purpose standardizing the access to information across a distributed database (col. 6, lns. 59-61).

Regarding claim 6, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that a subscriber unit 14 receives a codebook from a central repository 12 (Fig. 1) where a speaker independent portion may reside at the subscriber unit (col. 3, lns. 5-40), but Smith does not specifically teach "the capturing step is performed by a first server and the determining step is performed by a second server different from the first server." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that a user's utterance is sent to a central server which transfers it to an automatic speech recognizer (Figs. 2 and 3, col. 6, lns. 4-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by distributing the capture and recognition operations, as taught by Kanevsky, since this architecture is more adaptable (col. 5, lns. 1-9).

Regarding claim 12, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the identifier comprises address information". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including address information) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by specifically using address information, as taught by Kanevsky, to more logically access geographical information (see Schaffer, col. 6, lns. 62-67).

Regarding claim 14, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the identifier comprises location information". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including address information) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by specifically using address information, as taught by Kanevsky, to more logically access geographical information (see Shaffer, col. 6, lns. 62-67).

Regarding claim 16, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the vocal expression is a name". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including a name) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by specifically using the speaker's name to identify desired information, as taught by Kanevsky, to increase the reliability of the speaker recognition (e.g. col. 4, lns. 26-31, without the need for additional information).

Regarding claim18, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the vocal expression is a number". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including a customer number) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by specifically using a number to identify desired information, as taught by Kanevsky, to more logically access the speaker's information.

Regarding claim 19, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 18), but Smith does not specifically teach, "the number is one of a telephone number, zip code, social security number, or database index". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including social security number) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer by specifically using a social security number to identify desired information, as taught by Kanevsky, to uniquely identify a speaker during data access (col. 4, lns. 26-35, without additional information).

Regarding claim 20, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that by using speech recognition technology, a message (vocal expression) requesting the user's specific codebook is generated and transmitted to the central repository (database) (col. 2, lns. 16-27, col. 3, lns. 4-40) where the request is inherently mapped to an identifier to access specific information (linkage key as previously taught by Shaffer), which corresponds to "selecting a subset of records comprises indexing, based on the linkage key to a record".

Regarding claim 21, this claim has limitations similar to those in claim 1 and those limitations are rejected for the same reasons. But Smith does not specifically teach, "obtaining a grammar of potential matching words based on the second subset of records; determining from the selected record that a second subset of records is required to identify a specific item from the multiple items represented by the selected record." However, the examiner contends that this concept was well-known in the art, as taught by Kanevsky.

Kanevsky discloses methods for eliminating speaker candidates based on the response and activating databases corresponding to the remaining speaker candidates (col. 3, lns. 26-29 or col. 4, lns. 1-15),

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith, as taught by Kanevsky, to improve the accuracy of the recognition process (col. 3, lns. 11-19).

Furthermore, Smith does not specifically teach, "prompting a speaker to provide information to identify the specific item from the second subset of records." However, the examiner contends that this concept was well-known in the art, as taught by Kanevsky.

Kanevsky discloses methods for querying a speaker based on the information contained in the accessed database (col. 3, lns. 28-32 or col. 4, lns. 9-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith, as taught by Kanevsky, to customize the interaction improving the efficiency and reliability of the interaction (col. 3, lns. 11-19).

Regarding claim 22, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 21). But Smith does not specifically teach "first subset of records comprises street address information and the second subset of records comprises secondary address information related to a particular street address." However, the examiner contends that these concepts were well-known in the art, as taught by Kanevsky.

Kanevsky discloses that the first spoken utterance may contain indicia of the speaker (col. 3, lns. 22-25) possible including an address (col. 3, lns. 51-60) and that the speaker will then be queried with an additional question based on the accessed database attributable to the speaker or speaker candidates (i.e., questions related to speaker indicia, name, customer number, where if the first response was an address these data would be address related) (col. 3, lns. 25-29 or col. 4, lns. 5-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith, as taught by Kanevsky, to expand the range of data access (see Shaffer, col. 6, lns. 63-67).

2. Claims 2-5, 11, 13, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Kanevsky, Shaffer and well known prior art.

Regarding claim 2, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches several methods for generating a codebook request including the initial use of a speaker independent recognizer (col. 3, lns. 14-40), but Smith does not specifically teach, "capturing an identifier related to a speaker comprises automatically capturing information provided without input from the speaker." However, the examiner takes official notice of the fact that the automatic sending of speaker information over a communication channel for the purpose of identifying a speaker was well known in the art (e.g. caller ID).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith such that identifying information is

sent when the communications channel is first opened, to customize the communications for the particular speaker.

Regarding claim 3, Smith in view of Kanevsky, Shaffer and well known prior art teaches everything claimed, as applied above (see claim 2), but Smith in view of well known prior art do not specifically teach "the identifier related to a speaker comprises spatial information." However, the examiner contends that this concept was well known in the art, as taught by Shaffer.

Shaffer further teaches that the linkage key can be used for as a linkage mechanism between a telephone number and spatial information (col. 6, lns. 60-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky, Shaffer and well known prior art by specifically providing the features, as taught by Shaffer, since this is a solution to the problem of connecting a caller with an appropriate service location (col. 7, lns. 1-7).

Regarding claim 4, Smith in view Kanevsky, Shaffer, and well known prior are teaches everything claimed, as applied above (see claim 3), but Smith in view of well known prior art and Kanevsky do not specifically teach "selecting a subset of records based on the captured identifier comprises selecting a subset of records spatially related to the captured identifier". However, the examiner takes official notice of the fact that the use of a personal identifier related to spatial information for the purpose of retrieving spatial information was well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky, Shaffer and well known prior art such that a subset of records is retrieved according to a spatial identifier, since this is a very efficient way to retrieve data commonly associated with particular geographical locations (e.g. French is commonly spoken in France).

Regarding claim 5, Smith in view of Kanevsky, Shaffer, and well known prior art teaches everything claimed, as applied above (see claim 4). In addition, Smith teaches that the system may employ a limited version of speaker independent voice recognition technology to generate a codebook download request (col. 3, lns. 30-34), but neither Smith nor Smith in view of well known prior art and Kanevsky specifically teach "determining the meaning of the vocal expression comprises verifying an identification of the speaker." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that a first spoken utterance can contain indicia of the speaker (col. 3, lns. 22-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky, Shaffer, and well known prior art and Kanevsky by specifically providing a vocal means of verifying identification, as taught by Kanevsky, to support hands-free operation.

Regarding claim 11, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that the information sent to the server includes speaker indicia, such as name, address, customer number,

etc., but Smith does not specifically teach "the identifier comprises a telephone number." However, the examiner takes official notice of the fact that the sending of a telephone number (caller ID) over a communication channel for the purpose of identifying a speaker was well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith such that identifying information was sent when the communications channel as an identifier, since this is easily obtainable information.

Regarding claim 13, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 12). And, as mentioned in the rejection of claim 12, Smith in view of Kanevsky and Shaffer teaches the use of an address to identify a speaker (Kanevsky, col. 3, lns. 51-55), but Smith in view of Kanevsky do not specifically teach "the address information includes one or more of a street address, mailing address, zip code, electronic mail address, Internet address, and Web address." However, the examiner takes official notice of the fact that it was well known in the art a the time of the invention that the term "address" (as used in Kanevsky, col. 3, lns. 51-53) can be interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer such that address information was interpreted to mean one of the above-mentioned forms, since these are common interpretations of "address information."

Regarding claim 15, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 14). And, as mentioned in the rejection of claim 14, Smith in view of Kanevsky teaches the use of an address to identify a speaker (col. 3, lns. 51-55), but Smith in view of Kanevsky do not specifically teach "the location information is one of a V&H coordinate pair, latitude/longitude information, street address, and spatial key." However, the examiner takes official notice of the fact that it was well known in the art a the time of the invention that the term "address" (as used in Kanevsky, col. 3, lns. 51-53) was interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Shaffer such that address information was interpreted to mean one of the above-mentioned forms, since these are common interpretations of "location information."

Regarding claim 17, Smith in view of Kanevsky and Shaffer teaches everything claimed, as applied above (see claim 16). And, as mentioned in the rejection of claim 14, Smith in view of Kanevsky teaches the use of a name to identify a speaker (col. 3, lns. 51-55), but Smith in view of Kanevsky do not specifically teach "the name includes one or more of a first name, last name, street name, city name, state name, country name." However, the examiner takes official notice of the fact that it was well known in the art a the time of the invention that the term "name" (as used in Kanevsky, col. 3, lns. 51-53) was interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky such that name information was interpreted to mean one of the above-mentioned forms, since these are common and useful interpretations of "name."

Response to Arguments

3. Applicant asserts on page 5:

> In the Office Action the identification code, which the user enters, was pointed to as corresponding to the element of "capturing an identifier related to a speaker" of claim 1. It was admitted in the Office Action that Smith does not teach determining a linkage key using the identifier and further does not teach selecting a subset of records based upon the linkage key. Kanevsky and Ozsu were pointed to for remedying those deficiencies of Smith. However, in view of the amendment to claim 1, *Applicant further notes that Smith also does not teach or suggest "obtaining a grammar of potential matching words based upon the subset of records" as set forth in amended claim 1. Rather, Smith provides a user-specific code book which includes speaker-specific parameters, not potential matching words.* (Italics added)

Smith teaches that personal codebooks can be created by training (col. 2, lines 55-65) and that training is required so that a word can be recognized (col. 2, lines 4-7) (i.e., the codebooks contain the patterns required for recognizing individual words); thus, receiving a codebook corresponds to "obtaining a grammar of potential matching words ...".

4. Applicant asserts on page 6:

> Kanevsky describes a system wherein a caller identifies himself and then the system utilizes "specific information from the identified user's database to generate questions to the user." SCC Smith, column 6, lines 5-27. Note that Kanevsky uses the identification of the user to access a database associated with that user. Kanevsky does not teach or suggest capturing identifier and then determining a linkage key using the identifier. Rather, Kanevsky uses the identifier itself to directly access the database. In addition, Kanevsky accesses a database or data records directly associated with the user identified by the identifier. Further, Kanevsky does not use data or records obtained using the identifier to obtain a grammar of potential matching words.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, it is the combination of Smith in view of Kanevsky and Ozsu (now replaced by Shaffer) that teaches capturing an identifier and then determining a linkage key.

5. Applicant's remaining arguments are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

6. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It is noted that the closest prior art of record, Smith in view of Kanevsky and Shaffer teaches the use of a linkage key, but Smith in

view of Kanevsky and Shaffer does not teach the use of a second linkage key based on the meaning of a vocal expression.

Conclusion

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.

VPH/vph
June 3, 2004

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER